

Scientific Computing

Numpy and the Python Scientific Ecosystem

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Misc

Notes

- ▶ Please participate in writing today's lecture notes:
<https://yourpart.eu/p/lecture-scientific-computing04-notes>
- ▶ Glossary:
<https://yourpart.eu/p/lecture-scientific-computing-glossary>

Last homework

Discussion of homework 03.

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- ▶ Read and follow the exercise description carefully!
- ▶ Avoid working on the same notebook at the same time, use git pull/push before starting and when your done

Review test

See [menti.com](https://www.menti.com)

Recap

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- ▶ basic python syntax (variables, lists, functions, ...)
- ▶ a quick intro to some data types (integer, float, string, list)

Recap: Jupyter notebooks

How to run Python code

- ▶ Jupyter notebook (this is the only thing we are using in this lecture)
- ▶ Python terminal
- ▶ run a Python script from command line
- ▶ using an IDE/editor to run a script
- ▶ using an IDE/editor for something fancy (scientific mode with Spyder/PyCharm)

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Notebooks are low-threshold and easy to start with, but they can be confusing too.

A very good talk about why Jupyter notebooks are bad:

<https://www.youtube.com/watch?v=7jiPeIFXb6U>

(But you still have to use them, because there is no better alternative at the moment.)

Numpy and more

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See `lecture04.ipynb`!

Especially today: ask as many (good) questions as you can!

Homework assignment

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- ▶ Fetch the latest changes from the upstream repository, to get the homework Notebook:

```
cd path/to/homework-scientific-computing
git pull --no-edit upstream master
git push
```

- ▶ Start Jupyter and solve the exercises in the notebook: [homework04.ipynb](#).
- ▶ Commit the notebook file and push it to your fork.

Do the homework together!

Due on 6th of May, 17:00.

To avoid merge conflicts, you can either commit a copy of the notebook and add your Github name to the filename or solve the exercises together with your group members and `git pull` before starting to work on the notebook and `git push` before the next group member starts working on it.